

# Price Computing Scale Price Computing Series Operation Manual

#### INTRODUCTION

We wish to thank you for your purchase of our Price Computing Scale. This instrument has been designed and manufactured within the U.S.A. with quality and reliability.

This manual will help acquaint you with the features of this instrument, its proper installation, adjustment, operation and care. Please read this manual before attempting to operate the system and keep it handy for future reference.

#### **FCC COMPLIANCE STATEMENT**

WARNING! This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device persuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures necessary to correct the interference.

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OLITIAL NOMBLIT
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B/112 C. 1 C. 10.11.102
PURCHASED FROM
RETAIN THIS INFORMATION FOR FUTURE USE

#### **PRECAUTIONS**

Before using this instrument, read this manual and pay special attention to all "WARNING" symbols:



# **SPECIFICATIONS**

115 VAC, 50/60 Hz (Optional 230 VAC, 50/60 Hz); powering a 12 VDC, Power Requirements:

700 mA wall-plug-in power module

Dimensions: Base: 13 1/2"W x 12"D x 4 1/4"H (343mmW x 305mmD x 108mmH)

Platform: 13 1/2"W x 8 3/4"D (343mmW x 222mmD)

Weight: 14 lb (6.35 kg)

Operating Temperature: 14° F - 114° F (-10° C 40° C)

Weighing Accuracy: This equipment is manufactured in accordance with the recommendations

set forth by Handbook #44, issued by the United States Department of

Commerce, National Institute of Standards and Technology.

Color: Black and gray with color coded keypad

Load Cell: Single point strain gage

Preset prices: 100 keyboard programmable (retained in memory when power is off)

Accumulator: Accumulates multiple transactions up to \$9999.99 total

Tare: Keypad and push button

Calibration: Keypad entered

Display: 16 character .56" high red LED front and rear

> A. Weight: up to 5 digits B. Unit Price: up to 5 digits C. Total Price: up to 6 digits

Annunciators: lb version kg version

> Zero Zero Net Net Prepack Prepack Price per 1 lb Price per 1 kg Price per 100 g

Price ger 250 g

Serial Output: A. RS-232 (Selectable parity, data bits, and stop bits)

B. Selectable baud rate (1200, 2400, 4800, 9600, 19.2k, or 38.4k)

C. "Packed on" date (must be set daily) D. "Sell by" date (must be set daily)

E. Weight/price/total

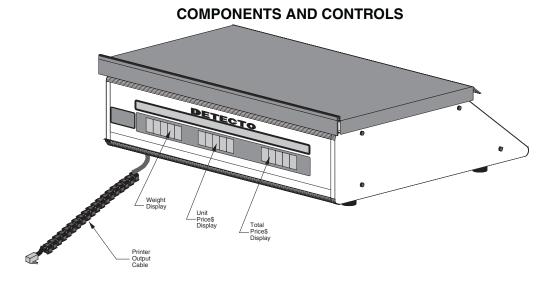
F. Programmable header stores 2 lines of name/address (32 characters

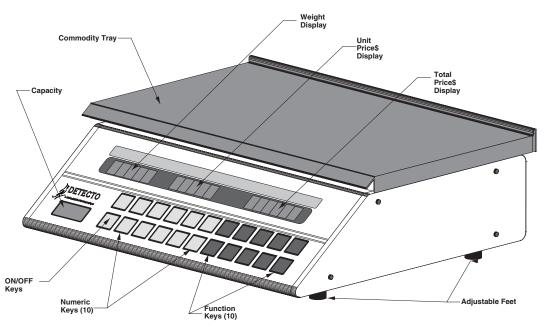
maximum)

G. Bar Code Prefix

MODEL	CAPACITY/GRADUATION	POWER
PC-10	6 x .002 lb	115VAC
PC-10KG	3 x .001 kg	115VAC
PC-20	15 x .005 lb	115VAC
PC-20KG	6 x .002 kg	115VAC
PC-30	30 x .01 lb	115VAC
PC-30KG	15 x .005 kg	115VAC
PC-31	30 x .01 lb	230VAC
PC-31KG	15 x .005 kg	230VAC

<sup>&</sup>quot;KG" models are metric models





#### **INSTALLATION**

# 1. UNPACK

Carefully unpack the scale and commodity tray. Remove the protective film from the front and rear displays. Make certain that no sign of damage to the instrument is visible. Should evidence of damage be found, the carrier should be contacted at once. Make certain to keep the carton and packing material should return shipment or storage of the instrument become necessary.

# **SHIPPING SCREWS**

The load cell is protected from shipping damage by two (2) shipping screws through the top housing and one (1) shipping thumb screw located on the bottom of the scale (see figure). Remove the two (2) shipping screws, the thumb screw and the warning label before using the scale. Retain the two (2) shipping screws and the thumb screw to be re-installed before transporting or shipping the scale. Note: Only hand tighten the thumb screw on the bottom of the scale and do not over-tighten the two (2) shipping screws through the top housing.



CAUTION!!! Transporting or shipping the scale without the shipping screws installed will void the load cell warranty.

# **COMPONENTS AND CONTROLS (cont.)**

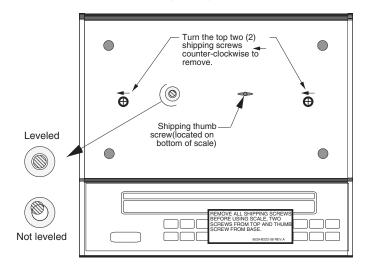
#### 2. PLACEMENT

Place the scale on a stable, vibration-free location away from direct sunlight and away from any rapid moving air source. Make certain the power cord is stored out of the way of normal traffic.



CAUTION!!! DO NOT place the scale on any unstable cart, stand or table. The

scale may fall, causing injury to the operator, and seriously damage the unit; or proper operation of the scale may be inhibited.



#### 3. LEVEL SCALE

Before mounting the commodity tray onto the scale, level the scale if necessary by adjusting the four legs on scale bottom, up or down, until the bubble in the level gage located on the scale housing is centered as shown in the figure above. After level is achieved, lock legs in place by tightening lock nuts on legs against the scale bottom.

#### **POWER SUPPLY**

- 1. Plug power supply into a wall receptacle that supplies 115 VAC power and into the connector on the underside of the chassis.
- 2. On models requiring 230 VAC power, use the Cardinal/Detecto model 8529-B216-08, 230 VAC power supply. After installation of the proper connection, plug scale power supply into 230 VAC receptacle.

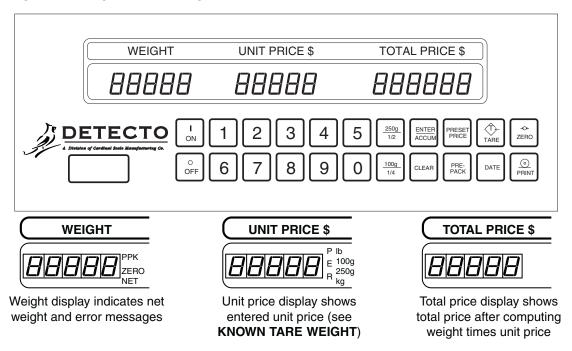


CAUTION!!! - To avoid electrical hazard and severe damage to the scale, use only the wall-plug-in power module provided with the scale.

3. START-UP - The scale is equipped with **ON** and **OFF** keys on the keypad. When the **ON** key is pushed, the scale will show zero weight, signalling that the scale is ready for use. If the deadload on the scale is not within  $\pm$  4% of the deadload used during calibration, the scale will display **LoAd** or **UnLoAd**, indicating that weight must be added or removed, respectively, from the platform. Once the deadload is within  $\pm$  4% of the deadload used during calibration, the scale will zero and is ready for use.

# **COMPONENTS AND CONTROLS (cont.)**

#### **DISPLAY WINDOW EXPLANATION**



#### **KEY FUNCTIONS**

This section describes the use of each of the keys on the Price Computing Scale.



The membrane keyboard is not to be operated with pointed objects (pencils, pens, fingernails, etc.). Damage to keyboard resulting from this practice will *NOT* be covered under warranty.



Pressing this key when the scale is off will apply power to the instrument.



This key is used to remove power from the scale, turning it off. Press and hold the **OFF** key for one or two seconds to completely remove power from the scale.



Tare can be subtracted by placing a container on the scale and pressing **TARE** or by keying in a known tare (container) weight on the keypad and pressing **TARE** when the unloaded scale is at true zero.



Pressing the **PREPACK** key after unit price is entered retains the unit price for repetitive price-computing. Tare entries are retained in PREPACK mode.



Pressing the **CLEAR** key cancels a unit price entry, cancels the PREPACK mode or clears an incorrect or unacceptable known tare entry.

NOTE: Pressing a fraction key, shown below, after a unit price has been entered computes price per fraction of a pound. After fraction key is pressed, unit price display will show price per pound (unit price multiplied by 2 or 4).



Pressing the **100g/ 1/4** key computes price per 100g or 1/4lb depending on the scale mode

# **KEY FUNCTIONS (cont.)**



Pressing the **250g/ 1/2** key computes price per 250g or 1/2lb depending on the scale mode.



NOTE: With the scale mode set for kg operation (Lb = D or No) and the FRACTION keys disabled (F = D or No) *ONLY* the 250g | 1/2 key will be disabled. The 100g | 1/4 key will remain enabled.



Pressing the **ZERO** key will rezero the weight display or when displaying the accumulator total, zero the accumulator.



Pressing the **PRINT** key initiates a serial data output.



Press the **PRESET PRICE** key and display requests price preset number. As each of the two digits is keyed, it is displayed in the total price window. After the second digit is keyed in, push the **ENTER** key. The recalled unit price will display and operations will return to normal. Refer to the **Setup and Calibration** section of this manual for setting preset prices. NOTE: If preset price number is a single digit (0 to 9), then enter the number and press the **ENTER** key.



Operator presses **DATE** key and is prompted for "packed on" date. Date is displayed in total price window as it is keyed. **ENTER** key ends entry. Operator is prompted for "sell by" date. Date is displayed in total price window as it is keyed. **ENTER** key ends entry and function. Note: Date must be re-entered whenever power has been interrupted.



R

Pressing the **ENTER/ACCUM** key when weight display is zero will cause the instrument to display the current contents of the accumulator (the number of pieces accumulated and total price since the last time the accumulator was zeroed). The maximum value of the accumulator is 9999.99.

# **INDICATOR FUNCTIONS**

The following describes the functions of each of the indicators contained on the face of the instrument display. Note that these indicators are contained within the display window.

PPK	Prepack mode
ZERO	True zero $\pm$ 1/4 division load indication
NET	Indicates that a tare weight is stored and weight display is net weight
P E Ib R	The unit price is price per pound
P E 100g R	The unit price is price per 100 grams
P E 250g R	The unit price is price per 250 grams
P E kg	The unit price is price per kilogram

#### **OPERATION**

#### **Normal Unit Price**

- 1. Place commodity on scale.
- 2. Key in unit price per pound or kilogram.
- 3. Read total weight and total price.
- 4. Remove commodity. Scale will return to zero, ready for next operation.

#### Unit Price Per 1/4 or 1/2 lb (so equipped)

- 1. Place commodity on scale.
- 2. Key in unit price per 1/4 of 1/2 lb.
- 3. Press corresponding fraction key. Note: indicated price will change.
- 4. Read total weight and total price.
- 5. Unit price display will show price per pound.
- 6. Remove commodity. Scale will return to zero, ready for next operation.

#### Unit Price Per 100/250 g (so equipped)

- 1. Place commodity on scale.
- 2. Key in unit price per 100/250 g.
- 3. Press 100/250 g key. 100/250 g indicator will illuminate.
- 4. Read total weight and total price.
- 5. Unit price display will show price per 100/250 g.
- 6. Remove commodity. Scale will return to zero, ready for next operation.

#### Tare Operation to Obtain Net Weight

- 1. Place container on scale.
- 2. Press **TARE** key.
- 3. Weight display goes to zero. Net weight indicator comes on.
- 4. Key in unit price.
- 5. Place commodity in container. Net weight of commodity will be displayed.
- 6. Read net weight and total price.
- 7. Remove container and commodity from scale. Scale will return to zero and clear tare and unit price information. Scale is ready for next operation. Note: Tare weight will only be cleared when scale returns to gross weight zero. If the tare does not clear when the Tare weight is removed, push the **CLEAR** key to return to gross weight zero.

#### **Accumulator Feature**

Adding a total price to the accumulator. When a stable total price is displaying, press the **ENTER/ ACCUM** key. The total price is added to the total price accumulator and the accumulator is displayed in the total price window. A transaction counter is increased by one and displayed in the unit price window. Any subsequent key press or motion on the scale will cause the totals display to disappear and the display to resume normal operation. Another "Add" cannot be performed unless the weight is removed from the scale and another weight placed onto it.

WEIGHT	UNIT PRICE \$	TOTAL PRICE \$
EDERIC PPK ZERO NET	P lb E 100g R 250g kg	1234

Reviewing the accumulator. When the weight display is at zero, press the **ACCUM** key. The contents of the transaction counter and the total price accumulator will display. To return to normal operation, press the **CLEAR** key. The accumulator contents are unchanged.

Clearing the accumulator function. Whenever the Total display is present, press the **ZERO** key. The transaction counter in the unit price window and the total price accumulator in the total price window will become zero. Press the **CLEAR** key to return to normal operation.

Note: Accumulator contents are lost if power is interrupted.

# **OPERATION** (cont.)

#### Tare operation for known tare (container) weight

Note: Known tare weights must be entered as numbers compatible with the particular scale division. Example: 30 lb x 0.01 = increments of 0.01 - 15 kg x 0.005 increments of 0.005. Any known tare entry not compatible with particular scale counting increments will be replaced and scale will display  $- \mu n E^{-}$ . Press **CLEAR** key and re-enter correct compatible number.

#### Ib Models

- 1. Key in known tare weight, up to 4 digits (ignoring the decimal point), as a number appearing in the unit price display.
- 2. Press **TARE** key. Entry will move to the weight display and be shown as negative (-) weight. Net indicator will illuminate.
- 3. Place container and commodity on scale. Net weight of commodity will be displayed. Enter unit price and proceed with price-computing operation.
- 4. After known tare operation is complete, tare weight will clear automatically after a positive weight is indicated, unit price has been entered and commodity is removed from scale.
- When the weight is at c/z (center of zero), any tare can be cleared by pushing the CLEAR key.

Note: Automatic tare clear is inoperable when scale is in the PREPACK mode.

#### kg Models

1. Key in known tare weight, up to 4 digits, as a number appearing in the unit price display (ignore decimal point). Example:

Key in 0.28 kg as 2-8-0 Key in 1.00 kg as 1-0-0-0 Key in 0.095 kg as 9-5 Key in 1.2 kg as 1-2-0-0

- Press TARE key. The acceptable tare entry will move to the weight display and be shown as negative(-) weight. Example: a tare entry of 1.50 kg should appear in the unit price display as 15.00. After the TARE key is pressed, the weight disply will show - 1.500 and Net indicator will illuminate.
- 3. After known tare operation is complete, tare weight will automatically clear after a positive weight is indicated, unit price has been entered and commodity is removed from scale.

Note: Automatic tare clear is inoperable when scale is in the PREPACK mode.

# Prepack (PPK) Operation

For repetitive price-computing of commodities with the same unit price:

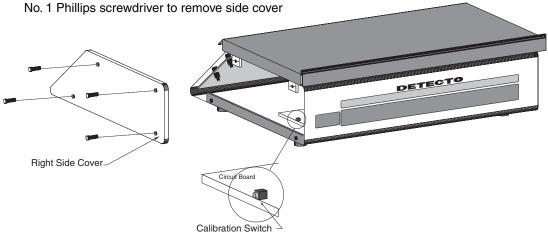
- Enter tare if so desired as outlined in **Tare Operation**. Tare entry will be retained in PREPACK mode.
- 2. Enter unit price and press PREPACK key. PREPACK mode indicator PPK will illuminate.
- 3. Place commodities on scale and proceed with operation.
- 4. When prepacking operation is ended, press **CLEAR** key to clear unit price and turn off PREPACK mode. Tare will then clear automatically.

Note: After PREPACK mode is entered, no change of unit price can be made until PREPACK mode is cancelled.

#### SETUP AND CALIBRATION PROCEDURE

This scale was calibrated at the factory and should not require adjustment. In the event that the scale should need calibration, the following describes the Calibration of the Price Computing Scale. A qualified technician should perform this function to maintain the instrument's high degree of accuracy. Before beginning calibration, the following equipment is required:

Calibration test weights (6 lb for PC-10, 15 lb for PC-20, or 30 lb for PC-30)
(3 kg for PC-10KG, 6 kg for PC-20KG, or 15 kg for PC-30KG)
No. 1 Phillips screwdriver to remove side cover



With the scale power off, remove the four (4) screws and two (2) calibration sealing tabs securing the right side cover (as viewed from the scale front) and remove the cover. Referring to the illustration, locate the calibration switch S1. Push and hold calibration switch S1. Press the **ON** key to turn power on. The weight display window will show  $\[ \[ \] \] \] P = \[ \] \]$ 



If sealing wires require breaking for purposes of calibration, proper procedures covered under the National Institute of Standards and Technology Handbook 44 must be adhered to.

WEIGHT	UNIT PRICE \$	TOTAL PRICE \$						
ZERO NET	P lb E 100g R 250g kg							

Note: The unit price window will usually contain the current value for the label in the capacity window if setup has been previously performed. Subsequent keystrokes will replace the current value.



CAUTION!! If power is interrupted during setup and calibration, new values entered are lost. However, <u>all</u> previously entered data will be retained. Note that new data entered is stored when the "donE" messge is displayed at the end of setup and calibration.

1. **CAP=** Select desired capacity value of 3, 6, 15, or 30, and press **ENTER**.

WEIGHT	UNIT PRICE \$	TOTAL PRICE \$							
PPK ZERO NET	P lb E 100g R 250g kg								

2. Lb= Select 1 (Yes) if lb, 0 (No) if kg and press ENTER.

WEIGHT	VEIGHT UNIT PRICE \$						
LB = PPK zero NET	P lb E 100g R 250g kg						

# **SETUP AND CALIBRATION PRIOCEDURE (cont.)**

3a. **LoAd** = If recalibration is not desired, press 0 (zero) then **ENTER** and proceed to step five.

3b. If recalibration is desired, apply a weight equal to 70%-100% of the scale capacity to the sca	lе
(do not use fractional lb or kg weights). Select the value of the weight and press ENTER.	

WEIGHT	UNIT PRICE \$	TOTAL PRICE \$								
LDAD ZERO NET	P lb E 100g R 250g kg									
4. <b>UnLd=</b> Remove the weight	nt from the scale and press <b>ENTER</b> to	proceed.								
WEIGHT	UNIT PRICE \$	TOTAL PRICE \$								
PPK ZERO NET	PrESS R 100g R 250g kg	Enler								
5. <b>UPdP=</b> Enter number of oprices) and press <b>ENTER</b> .	decimal places in the unit price; 0,1,2, c	or 3 (does not affect preset								
WEIGHT	UNIT PRICE \$	TOTAL PRICE \$								
PPK ZERO NET	P lb E 100g R 250g R kg									
6. <b>tPdP=</b> Enter number of de	ecimal places in the total price; 0,1,2, o	r 3 and press <b>ENTER</b> .								
WEIGHT	UNIT PRICE \$	TOTAL PRICE \$								
EPdP = PPK ZERO NET	P lb E 100g R 250g kg									
7. rnd5= Enter 1 (Yes) to rou ENTER.	und total price to nearest 5, 0 (No) for r	normal operation and press								
WEIGHT	UNIT PRICE \$	TOTAL PRICE \$								
PPK ZERO NET	P lb E 100g R 250g kg									
8. <b>tPbL=</b> Enter 1 (Yes) to endisable and press <b>ENTER</b>	nable total price blanking when scale m	notion is present, 0 (No) to								
WEIGHT	UNIT PRICE \$	TOTAL PRICE \$								
PPK ZERO NET	P lb E 100g R 250g R kg									
9. <b>FrAC=</b> Enter 0, 1, or 2 and press <b>ENTER</b> .  0 = Fraction keys are disabled in lb mode or only 250 kg in kg mode.  1 = Enables both fraction keys (lb or kg mode).  2 = Disables both fraction keys (lb or kg mode).										
WEIGHT	UNIT PRICE \$	TOTAL PRICE \$								
F-AL zero	P lb E 100g R 250g kg									

# **SETUP AND CALIBRATION PROCEDURE (cont.)**

10. tArE= Enter 0, 1, or 2 and press ENTER. 0 = Disables keypad tare and enables push button tare. 1 = Enables both keypad and push button tare. 2 = Disables both keypad and push button tare. **WEIGHT UNIT PRICE \$ TOTAL PRICE \$** P lb E 100g ZERO 250g kg 11. otrA= Enter 1 (Yes) to enable automatic zero tracking, 0 (No) to disable. Press ENTER. **WEIGHT UNIT PRICE \$ TOTAL PRICE \$** P lb E 100g ZERO 250g R 12. FiLt= Enter 0 (zero) for NO filtering (and sample rate of 3), or select additional filtering by entering a 1, 2, or 3. Press ENTER. Note: If 0, 1, or 2, was entered, proceed to step 13. 1 changes the sample rate to 4 samples per second. 2 changes the sample rate to 4 sample per second. 3 allows customizing the filter for special needs. WEIGHT **UNIT PRICE \$ TOTAL PRICE \$** P lb E 100g ZERO 250g 12a. If 3 was entered as the filter (FiLt=), additional information must be entered. The display below requests a Filter weight (F=) value. Allowable values are 0 to 16. The higher the value, the smaller the effect changes in weight or external vibration will have on the displayed weight. Press ENTER after keying in the value. WEIGHT **UNIT PRICE \$ TOTAL PRICE \$** PPK E 100g ZERO 250g kg 12b. br= requests a Break range value for filter #3. Allowable values are 0 to 64. This represents the number of graduations of weight change to break out of filtering. The higher the number, the greater the filtering. Press ENTER after keying in the desired value. WEIGHT **UNIT PRICE \$ TOTAL PRICE \$** P lb PPK E 100g ZERO R 250g NET 12c. Sr= requests a Sample rate value for filter number 3. This value represents the rate at which the displayed weight is refreshed. Allowable values are 1, to 8 samples per second. The lower the number, the slower the refresh and the more resistant the weight will be to vibration or other causes of weight deviation. After selecting value, press ENTER.

Items 13, 14 and 15 for Printer Output Only

P lb

E 100g

R 250g

**UNIT PRICE \$** 

**TOTAL PRICE \$** 

**WEIGHT** 

PPK

ZERO

# SETUP AND CALIBRATION PROCEDURE (cont.)

13.	<b>bAUd=</b> Enter the value 12 = 1200 baud 24 = 2400 baud	ue for the baud rate desired and press the <b>I</b> 48 = 4800 baud	ENTER key.
	WEIGHT	UNIT PRICE \$	TOTAL PRICE \$
	PPK ZERO NET	P lb E 100g R 250g kg	
14.	<b>PAr=</b> Enter the value 0 = no parity (8-N-1)	for the parity setting desired and press the 1= even parity (7-E-1) 2	ENTER key. 2 = odd parity (7-O-1)
	WEIGHT	UNIT PRICE \$	TOTAL PRICE \$
	PPK ZERO NET	P lb E 100g R 250g kg	
15.	0 = P200 (El 1 = user defi 2 = P200 (El	for the type of label printer to be used and p tron Companion Plus) ned (via Visual Print) tron Companion Plus) with DSR handshake ned (via Visual Print) with DSR handshake	e check
	WEIGHT	UNIT PRICE \$	TOTAL PRICE \$
	PPK ZERO NET	P lb E 100g R 250g kg	
Allo	wable values are 0 (no ered multiplied by 0.2. If a 1 second delay	to select the delay before responding to a delay) to 255. The actual delay time (in ser For example: is desired, then SdLY= 5 (5 $\times$ 0.2 = 2) is desired, then SdLY= 10 (10 $\times$ 0.2 = 2)	
17.	in ASCII decimal form appear in the unit pri- window. Enter a 0 (z	npted for up to 32 characters of a store name in (see following table). Each 2 or 3 digit change are window as it is keyed and a character with ero) and press the <b>ENTER</b> key twice to end as entered, use the <b>ZERO</b> key to back up and	aracter definition entered will ill appear in the total price definition entry. To
	WEIGHT	UNIT PRICE \$	TOTAL PRICE \$
	PPK ZERO NET	<b>□ □ □ □</b> P lb E 100g R 250g kg	

# **SETUP AND CALIBRATION PRIOCEDURE (cont.)**

# STORE NAME/ID CHARACTER TRANSLATION TABLE

Character	<u>Value</u>	Character	<u>Value</u>	Character	<u>Value</u>	Character	<u>Value</u>
Α	65	а	97	0	48	SPACE	32
В	66	b	98	1	49		
С	67	С	99	2	50		
	68	d	100	3	51		
D E	69	е	101	4	52		
F	70	f	102	5	53		
G	71	g	103	6	54		
Н	72	g h	104	7	55		
1	73	i	105	8	56		
J	74	j	106	9	57		
K	75	k	107	#	35		
L	76	I	108	\$	36		
M	77	m	109	%	37		
N	78	n	110	&	38		
0	79	0	111	1	39		
Р	80	р	112	(	40		
Q	81	q	113	)	41		
R	82	r	114	*	42		
S T	83	S	115	+	43		
T	84	t	116	,	44		
U	85	u	117	-	45		
V	86	V	118		46		
W	87	W	119	/	47		
X	88	х	120	:	58		
Y	89	У	121	;	59		
Z	90	Z	122	@	64		

#### STORE NAME/ID

Characters

00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Note: All unused locations to the right are ignored.

17a. **bArC=** Enter 1 (Yes) to provide bar code printing, 0 (No) to disable. Note: If 0 was entered, proceed to done 18.

WEIGHT	UNIT PRICE \$	TOTAL PRICE \$
BALL = PPK ZERO NET	P lb E 100g R 250g kg	

17b. **bArP=** If the previous bar code? (bArC=) question was answered Yes, this prompts the operator for 5-digits of bar code prefix. Enter exactly 5-digits, followed by the **ENTER** key.

WEIGHT	UNIT PRICE \$	TOTAL PRICE \$
BRPP ZERO NET	7 2 3 4 5 E 100g R 250g kg	



**NOTE:** If **Prt=** 1 or 2, setup will bypass steps 17a and 17b (bArC= and bArP=) and the display will advance to step 18 (donE), indicating the calibration/setup process is complete.

# **SETUP AND CALIBRATION PRIOCEDURE (cont.)**

18. **donE=** Indicates that calibration/setup is complete and calibration data will be stored at this time. Press the **OFF** key to turn power off. Replace the right side cover and secure using the four (4) screws and two (2) calibration sealing tabs removed earlier. Press the ON key to turn power on. The scale is ready to use.

WEIGHT	UNIT PRICE \$	TOTAL PRICE \$
PPK ZERO NET	P lb E 100g R 250g kg	

#### **SETUP REVIEW MODE**

The SETUP REVIEW MODE allows the Baud Rate (bAUd=), Parity (PAr=), Printer Selection Option (Prt=), Select Delay (SdLY=), Store Name/ID (id=), the Bar Code Printing Option (bArC), and the Bar Code Prefix (bArP) to be changed without entering the calibration mode and performing the setup and calibration procedure.

To enter the review mode, hold down the **ENTER** key while depressing the **ON** key to turn power on to the scale. The display will show (bAUd=).

Refer to Setup and Calibration Procedure, steps 13 through 16, to change the baud rate, parity, printer, and Store Name/ID. Refer to step 17a to enter the selection to enable bar code printing and, if enabled, step 17b to enter the Bar Code Prefix (bArP=).

#### PRESET PRICE SETTING

1. Operator presses PRESET PRICE key, then the ENTER key.

WEIGHT	UNIT PRICE \$	TOTAL PRICE \$
PPK ZERO NET	P	

2. Operator keys in two digits (00 to 99) representing the price preset number then presses the **ENTER** key.

WEIGHT	UNIT PRICE \$	TOTAL PRICE \$
ZERO NET	P P 3	

3. Operator then enters the unit price to preset and presses the **ENTER** key to end the function. NOTE: Unit price limit is \$999.99.

WEIGHT	UNIT PRICE \$ TOTAL PRICE \$	
PPK ZERO NET	<b>326</b> P lb E 1009 R 2509 R kg	

# PRESET PRICE RECALL

1. Operator presses **PRESET PRICE** key. Display requests price preset number.

WEIGHT	UNIT PRICE \$	TOTAL PRICE \$
PPK zero NET	P lb E 100g R 250g kg	36

2. Operator keys in one or two digits (00 to 99) representing the price preset number, then presses the **ENTER** key.

WEIGHT	UNIT PRICE \$	TOTAL PRICE \$
PPK ZERO NET	P lb E 100g R 250g kg	

- 3. Repeat both steps to recall other preset prices.
- 4. Press the **CLEAR** key to return to normal operation mode.

**DATE ENTRY** (must be re-entered if power is interrupted)

1. Operator presses **DATE** key and is prompted for Packed on date (PdRE).

WEIGHT	UNIT PRICE \$	TOTAL PRICE \$
ZERO NET	<b>PARLE</b> R 100g R 250g kg	060800

- Operator keys in six digits (MM DD YY) repesenting the packed on date, then presses the ENTER key.
- 3. Operator is prompted for Sell by date (5 dR LE).

WEIGHT	UNIT PRICE \$	TOTAL PRICE \$
ZERO NET	5 4 A L E   P   Ib   E   100g   R   250g   kg	060800

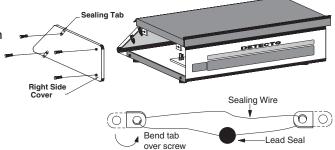
4. Operator keys in six digits (MM DD YY) repesenting the sell by date, then presses the **ENTER** key.

NOTE: To change only the sell by date, press the CLEAR key at the packed on date prompt.

#### RECOMMENDED SEALING

To prevent access to interior components, seal the indicator as follows:

- Bend tab over end cap retaining screw as shown. Press the tab down against the screw head. Make certain both screws are tightened securely before proceeding.
- Thread the sealing wire through the hole in the tabs as shown. Pull the wire tight and install the lead seal. Neither screw can be removed without damaging the seal.



#### **CARE AND MAINTENANCE**

- 1. **DO NOT** subject the commodity tray to sudden shocks.
- 2. **DO NOT** submerge the scale in water or spray water directly on the scale. The scale may be cleaned using a damp soft cloth and mild detergent.
- 3. **DO NOT** use an abrasive cleaner on this instrument.
- 4. **DO NOT** use acetone or other volatile solvents for cleaning.
- 5. **DO NOT** use any sharp or pointed instrument to depress keys.

# **ERROR MESSAGES**

	ERROR WESSAGES
EAL,B	Indicates that the scale has never been setup and calibrated or has been interrupted during the setup and calibration sequence.
ErrAL	Indicates a faulty component or broken wire in the analog circuitry of the instrument.
FA, L2	Will appear whenever the program cannot write data into the system memory (setup and calibration is in progress).
-   -   -   F   -	Will appear in the weight display whenever a net weight exceeds -9999 (4 digits negative).
	Indicates the scale weight capacity (999,999) has been exceeded.
UnSEb	Indicates motion on the commodity tray during sampling. This message may occur when:  1. The <b>PRINT</b> key is pressed.  2. The <b>ZERO</b> key is pressed.  3. The <b>TARE</b> key is pressed (to enter current weight as push button tare).
Error	Indicates an incorrect key depression. It is accompanied by a long tone (beep).
LoAd	Indicates there is insufficient deadload for the scale to zero.
UnLod	Indicates there is too much deadload for the scale to zero.
- 0 U F -	The error message <b>-ouF-</b> (overflow) will appear in either the unit price or total price displays whenever the amount to display exceeds 99999 for unit price or 999999 for total price. <b>-ouF-</b> will also appear in the weight window when an attempt is made to tare a weight greater than 9999.
- ,  n E -	The error message <b>-int-</b> (interval) will appear in the unit price display whenever the keyboard tare weight division value isn't the same as the scale ivision value. For example, a PC-20 (15 lb $\times$ .005 lb) will display <b>-int-</b> if you attempt to enter 1.003 for the tare weight.
-   -   -   -	The error message <b>-trL-</b> (zero tracking limit) will appear in the unit display whenever the <b>ZERO</b> key is pressed with the weight outside the scale zero weight range. NOTE: Only 4% of scale capacity can be zeroed.
5ErouF	The error message <b>SErovF</b> (serial overflow) will appear in the total price display whenever the scale's serial buffer is overrun during communication.
a	The error message <b>noPrt</b> (no printer) will appear when attempting to print without a "handshake cable" if the value for Prt= is a 2 or 3.
584109	The message <b>SAving</b> (saving) is displayed while downloading a Visual Print ticket.

# **BEFORE YOU CALL FOR SERVICE...**

Customer satisfaction is of utmost importance. Should you experience difficulty with the operation of this instrument, please check the following items before requesting service:

- 1. Is the power supply fully inserted into the wall receptacle?
- 2. Is the power supply connector fully inserted into the scale power supply receptacle?
- 3. Is the wall receptacle receiving power? Does another piece of equipment work when plugged into this receptacle? Has the circuit breaker been checked?
- 4. Has proper operation procedure been followed?
- 5. Have the shipping screws been removed?

If you have any problems, DO NOT TRY TO REPAIR THIS UNIT YOURSELF! Unplug the power cord and contact your dealer.

# THERMAL PRINTER TROUBLE SHOOTING GUIDE

Symptom	Solution or Reason
READY indicator does not light GREEN.	Check the power connections, both at the rear of the printer and at the wall outlet.
READY indicator lights GREEN, but printer will not print.	Check the interface cable connections from the scale to the printer.
Printer appears to be working, but nothing is printed.	<ol> <li>Verify labels are the correct type (direct thermal).</li> <li>Check that roll is properly loaded (see printer manual page 4).</li> </ol>
Printing is faded or poor quality	Ensure front door (cover) is fully closed.
Prints only partial label.	<ol> <li>Label caught on printhead. Clean print head. Use ONLY soft plastic to scrape the label from the printhead. DO NOT USE METAL OBJECTS; printhead may be permanently damaged.</li> <li>When loading the first (initial) roll of labels, OR when loading a different size label, approximately one to three labels will be used to establish the TOF (top of form) setting. NOTE: The TOF is determined by the gap between the labels. To check the TOF setting, press FEED. Only one label should advance.</li> </ol>
Printer skips labels.	The Label Sensor is missing the gap between the labels due to one of the following reasons:     A. Operator is holding label backing in an upwards direction as it exits the printer.     B. The labels are exiting close to an obstruction, forcing the labels to exit in an upwards direction.     C. The backing is allowed to pile up in front of the printer, forcing the labels to exit in an upwards direction.
Printing stops, READY indicator flashes.	Printer is out of labels.
Printing stops, READY indicator flashes for 3 seconds then returns to GREEN.	<ol> <li>Possible label jam.</li> <li>Communication error. Check interface cable and PRT= settting in Setup and Calibration.</li> </ol>

# SERIAL DATA OUT AND WEIGH ON DEMAND FUNCTION

The PC series scale will transmit SMA Level 1 compliant serial weight data when the **PRINT** key is depressed *or* when connected to a host (Weight On Demand). When connected to a host, serial weight data will be transmitted to the host in a SMA Level compliant format when the host sends the scale a <If> W <cr> (linefeed, capital W, and a carriage return) *or* in an alternate format when the host sends the scale a W (capital W only).



The Weight On Demand feature equires a special serial cable (Cardinal P/N 8529-B305-0A) connected between the scale and host.

#### **SMA Level 1 Compliant Format**

When the **PRINT** key is depressed or the Weight On Demand command (<If> W <cr>) is sent by the host, the weight data will be transmitted in the following format:

#### <lf>srnmfxxxxxx.xxxuuu<cr>

where: <If> - line feed (oA hex)

s - Status 'Z' = Center of Zero 'O' = Zero Error

' '= space (none of the above)

r - Range '1'

n - Gross/Net status

m - Motion Status 'm' = scale in motion

' '= scale not in motion

f - Reserved for future use

xxxxxx.xxx - Weight (fixed at 10 characters)

uuu - Unit of measure

<cr> - Carriage return (0D hex)

#### **Alternate Weight On Demand Format**

When the alternate Weight On Demand command "W" (57H) is sent, the weight data will be transmitted in the following format:

Response: Weight

1 byte	STX	02H
5 byte	WEIGHT	Kg = XX.XXX
1 byte	CR	0DH

Response: ERROR

1 byte	STX	02H
1 byte	?	3FH
1 byte	STATUS	
1 byte	CR	0DH

#### STATUS:

Bit 4 = 1 center of zero
Bit 2 = 1 under zero
Bit 1 = 1 out of range
Bit 0 = 1 motion

# PC SERIES INTERFACE CABLES

The PC series scale can be interfaced to different Detecto printers as well as to a host computer. The following table lists the model numbers of the printers supported and the cable required to connect to them or to a host computer.

#### **PC Series Interface Cables**

Printer Model Number	Cardinal P/N
P200	6980-1047
P220/P240	8529-B304-0A
HOST (computer 9-pin)	8529-B305-0A

**NOTE:** Using Visual Print, <u>serial</u> printers from other manufacturers may be used with the PC series scale. Some printers *may* work using one of the above listed standard cables, others *may* require a custom built cable. **It is the responsibility of the purchaser to insure that the custom built cable is correctly wired.** Refer to the printer manufacturer's owner's manual and the following illustration to determine the correct cable configuration.

# **Serial Data Output Connector**

Pin 1	N.C. (no connection)
Pin 2	GROUND
Pin 3	TXD (transmit)
Pin 4	RXD (receive)
Pin 5	DSR(data set ready)
Pin 6	N.C. (no connection)

